TIMEPIECE MODULE WITH BI-STABLE DISPLAY

ABSTRACT

The bi-stability of electrophoretic and gyricon display technologies allows a display to maintain its image for a period of time without the driving electronics activated. The watch takes advantage of this attribute by being powered once a minute. This minimizes power consumption while not decreasing the functionality of the watch. Unlike LCDs, every segment of an electrophoretic display can be addressed by a conductive matrix, even segments encircled by other addressable segments. This allows the watch to have a visual alarm wherein every segment is inverted at a predetermined rate. In other words, time could be displayed in dark numbers against a light background. The image would then be inverted so that the light numbers would be displayed on a dark background. The display can be purposefully forced to all light or all dark until the users queries the watch for the time. This provides an aesthetic effect until the user actually needs to see the time.